

BELYAKOV, P.Ye.; BABIN, B.N.; BAL', V.; BOROVKOV, P.N.; VOYEVODIN, I.N.;  
 GUREVICH, G.M.; GORBUNOVA, P.I.; KONNOV, A.S.; KALANTAROVA, M.V.;  
 KASHIRSKIY, A.Ya.; KAZANCHIYEV, Ye.N.; LEKSUTKIN, A.F.; LETI-  
 CHEVSKIY, M.A.; LOPATIN, S.Z.; MIRSKIY, V.N.; PODSEVALOV, V.N.;  
 SUBBOTINA, V.P.; TANASIYCHUK, N.P.; PEDOTOV, S.D.; FISENEO, K.N.;  
 EL'KIND, I.G.; BOVIN, S.S.; VASIL'YEV, L.T.; DRINKOV, V.D.; DALE-  
 CHIN, N.I.; DADAGOV, I.A.; YERMOSHINA, V.I.; ZHUKOV, I.V.; ZIMIN,  
 D.A.; IVANNIKOV, A.Ya.; KOVALEV, M.K.; LUGAKOVSKIY, N.L.; NALEVSKIY,  
 A.F.; SEREZHNIKOV, V.K.; SEMIGLASOV, M.D.; SOKOLOV, A.V.; STEPANOV,  
 V.I.; SAKHARIN, G.S.; SAVENKO, P.A.; SOLODOV, V.P.; UMEROV, Sh.Kh.;  
 CHIKINDAS, G.S.; SHCHERBUKHINA, S.N.; DYKIN, G.Z.; LYSOV, V.S.;  
 OSHEROVICH, A.N.; ROKITSINSKIY, E.V.; BRASLAVSKIY, M.S.; RUDENKO,  
 I.A.; ZHUKOBORSKIY, M.S.; ZHDANOV, I.Ye.; SUSLIN, V.A.; BRUS, A.Ye.;  
 VOLYNSKIY, S.A.; KLYUYEV, V.A.; ISTRATOV, A.G.; TIKHOMIROV, I.F.;  
 BUTYRIN, Ya.N.; VOLYNSKIY, S.A.; MINEYEV, M.F.; MAL'TSEV, V.I.;  
 VIDETSKIY, A.F., kand.tekhn.nauk, glavnyy red.; DEMIDOV, A.N., red.;  
 KRAVETS, A.L., red.; KLIMOVA, Z.I., tekhn.red.

[Industrial Astrakhan] Promyshlennaya Astrakhan'. Astrakhan',  
 Izd-vo gazety "Volga," 1959. 318 p. (MIRA 12:11)

1. Astrakhan (Province) Ekonomicheskii administrativnyy rayon.  
 (Astrakhan Province--Economic conditions)

SOLODOV, V.Ya.-----

Fully mechanized sector for the manufacture of shell molds.  
Lit. proizv. no.2:43 F '63. (MIRA 16:3)  
(Shell molding (Founding)--Equipment and supplies)

SOLODOV, Yu., inzh.-mayor; SACHENKO, M., mayor tekhn.sluzhby

They are increasing the readiness of equipment. Tyl i snab.  
Sov. Voor. Sil 21 no.11:81-84 N 61. (MIRA 15:1)  
(Russia--Army--Fuel)

SEMKO, Yu.I.; SOLODOV, Yu.S.; LEVIN, M.I.

Analog to digital function converter for a.c.transducers for  
scanning control systems. Izv.tekh. no.11:35-39 N '61.

(MIRA 14:11)

(Electronic calculating machines)

L 00008-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1)

ACCESSION NR: AR5008446

UR /0271/65/000/002/A035/A035  
621.398.694

43  
B

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.  
Svodnyy tom, Abs. 2A208

AUTHOR: Levin, M. I.; Semko, Yu. I.; Semenov, V. F.; Solodov, Yu. S.;  
Yevtikhiyev, N. N.; Mozheyko, A. A.

TITLE: Measuring units of the "Tsentrrotekhnika" system

CITED SOURCE: Tr. Mosk. energ. in-ta, vyp. 52, 1963, 133-146

TOPIC TAGS: supervisory control system / Tsentrrotekhnika system

TRANSLATION: Measuring units are described of the "Tsentrrotekhnika" supervisory control system. The system is designed for operation with several types of thermocouple sensors, resistance thermometers, and differential-transformer sensors. For each type, special measuring units have been developed which connect the sensor output with the nonelectric measurands and convert them into a binary digital code. Each measuring unit is constructed as a separate adapter which includes all measuring elements. By means of a special plug-and-socket

Card 1/2

into the code by means of  
settings are used to obtain signals  
Bibl. 4.

ENCL: 00

SUBMITTED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652220001-2"

Card 2/2

L 53827-65 EWT(d)/EWT(1)/EEC(m)/EEC(f)/EWP(v)/EEC-4/EWP(k)/EWP(h)/EWA(h)/EWP(1)  
 ACCESSION NR: AP5009875 Pq-4/Pf-4/ UR/0115/65/000/002/0044/0046  
 Feb/Pg-4 621.374

AUTHOR: Levin, M. I.; Semko, Yu. I.; Solodov, Yu. S.; Mikhaylov, Ye. V. 3/6

TITLE: Encoding the output signals of pulse-supplied M-var sensors 10

SOURCE: Izmeritel'naya tekhnika, no. 2, 1965, 44-46

TOPIC TAGS: mutual inductance sensor, industrial process control 14

ABSTRACT: As the measurement process with a variable-mutual-inductance (M-var) sensor of a differential-transformer or ferrodynamic type supplied by commercial 50 cps has been slow, the authors suggest supplying the sensor with 4-msec sawtooth pulses. An experimental model had a measurement time of 2 msec, an output range of 0-0.5 v, and a basic error of  $\pm 0.5\%$ ; varying the pulse tilt angle by  $\pm 10\%$  resulted in an additional error of  $\pm 0.8\%$ . Variation of the supply voltage of an analog-digital-converter by  $\pm 20\%$  did not introduce a noticeable error. Only a block diagram is given. Orig. art. has: 5 figures and 10 formulas.

Card 1/2

L 53827-65  
ACCESSION NR: AP5009875

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC, IE

NO REF SOV: 000

OTHER: 000

*Am*  
Card 2/2

SOLGDOV, Yu.S.

Interference-killing feature of measuring circuit systems  
for scanning control. Izv. Vuz. no.11:21-25 N '65.

(MDA 18:12)



MURASHOV, K.; YATSEVICH, V.; SOLODOVA, A.

Developing the planned efficiency at the Moscow Milling Combine No. 4.  
Muk.-elev. prom. 28 no.8:13-15 Ag '62. (MIRA 17:2)

1. Moskovskiy mel'nichnyy kombinat No.4.

SOLEDOV: A.

Physicochemical methods for the determination of antibiotics:  
a review. Appl. Biol. 14 no.6:75-78. 1975. (M.S. 1801)

1. Parnitskii, V.I. Fakult'et I Moskovskogo ordena Lenina  
meditsinskogo instituta Imeni I.M. Sechenova.

GABANIN, B.A.; NESMELOVA, Z.P.; GURILEVA, N.P.; SOLOIOVA, F.G.

Results of using Ol'kenitskii's medium for the study of microbes  
of the Enterobacteriaceae family. Lab. delo no.8:498-500 '65.  
(MIRA 18:9)

1. Bakteriologicheskaya laboratoriya Infektsionnoy bol'nitsy  
No.23 (glavnyy vrach - zasluzhennyy vrach RSFSR S.M. Raskina)  
Avtozavodskogo rayona goroda Gor'kogo.

SOLODOVA, I. I.

A.B. RONOY, M.S. MIKHAYLOVSKAYA, I.I. SOLODOVA (USSR)

"Evolution of chemical and mineralogical composition of sandstones."

Report presented at the Conference on Chemistry of the Earth's Crust,  
Moscow, 14-19 Mar 63.

YAN V.V.; YAN V.V.; YAN V.V.

structural conditions for the localization of beryllium  
mineralization in seams. Izv.vys.ucheb.zav.: tovet.mat.  
8 no.23-7 '65. (MIRA 1961)

1. Kafedra geologii i mestorozhdeniy poleznykh iskopayemykh  
Nevskiy skola geologorazvedochnogo instituta. Submitted  
March 5, 1964.

SOLODOVA, M. N.  
Moscow State Pedagogical Inst imeni V. I. Lenin

SOLODOVA, M. N.- "Methods of teaching the subject 'Natural regions. The population of the earth' in the beginning course in physical geography in the fifth class."  
Moscow State Pedagogical Inst imeni V. I. Lenin. Moscow, 1956.  
(dissertation for the Degree of Candidate in Pedagogical Sciences)

SO: Knizhnaya Letopis', No. 20, 1956

SOLODOVA, M.N. (Smolensk)

Methodology of teaching "Natural zones" in the fifth grade course.  
Geog.v shkole 24 no.3:17-20 My-Je '61. (MIRA 14:5)  
(Physical geography—Study and teaching)

SOLODOVA, M.N. (Smolensk)

"Using the geographical training area in teaching geography in the fifth grade" by V.G.Erdeli, Kh.A. Samakaev. Reviewed by M.N. Solodova. Geog. v shkole 24 no.4:95-96 J1-Ag '61. (MIRA 14:8)  
(Geography--Study and teaching)  
(Erdeli, V. G.) (Samakaev, Kh. A.)



L 40294-66 INT(m)/RNP(j)/T IJP(c) RM/JJ/JND

ACC NR: AR6014586 (A)

SOURCE CODE: UR/0081/65/000/021/SQ46/SQ46 38 B

AUTHORS: Kozlov, L. M.; Solodova, N. L.; Burnistrov, V. I.

TITLE: Nitro group-containing polyurethanes<sup>1</sup> 1. Synthesis<sup>1</sup> of nitropolyurethanes<sup>1</sup> by polymerizing 2,4-toluylenediisocyanate<sup>1</sup> with nitrodiols and nitrotriols

SOURCE: Ref. zh. Khimiya, Abs. 21S282

REF SOURCE: Tr. Kazansk. khim.-tekhnol. in-ta, vyp. 33, 1964, 198-205

TOPIC TAGS: polyurethane, polycondensation, polymer cross linking, polymerization rate

ABSTRACT: Polymerization<sup>1</sup> of toluylenediisocyanate with 2-nitromethylpropanediol-1,3; 2-nitro-2-triol-1,2,3; 2-nitro-2-oxymethylbutanediol-1,3; and 2-nitro-2-oxymethylhexanetriol was investigated. Reaction was conducted at temperatures from 18 to 132C in chlorobenzene, dioxane, ethyl acetate, or butyl acetate solution. Optimal ratio of reagents to each other is 1:1, ratio of reagents : solvent = 1:2. It was found that the rate and general course of the polycondensation reaction is analogous to those of triols not substituted with nitro groups, however, the molecular weight of the obtained polymers is lower. Polymers produced by nitrodiols at low temperatures are soluble in acetone and ethyl acetate and are precipitated from solutions with benzene and petroleum ether. Increase of the reaction temperature leads to an increase of molecular weight from 1500 to 10 000. In the case of triols, this is accompanied by formation of three-dimensional cross-linked polymers. Soluble poly-nitrourethanes form transparent films highly adhesive to wood, glass, and metal. V. Kopylov /Translation of abstract/

Card 1/1/1/1 SUB CODE: 11,07

SOLODOWA, M. S., KAZANSKY, I. M.; P. 111-112, 113.

Kinetics of the reaction between diisocyanates and mono-  
substituted polyols. Vysokom. med. 7 no. 9:1650-1654, 1975.  
(MIRA 18:10).

2. Kazanskoye Khimiko-tekhnologicheskoye Institut im. I. M. Giklova.

ACC NR: AR6020539

SOURCE CODE: UR/0081/66/000/003/0043/5044-77

AUTHOR: Solodova, N. L.; Kozlov, L. M.; Gurnistov, V. I.

TITLE: Nitro-containing polyurethanes. Part 2. Synthesis of nitropolyurethanes by polymerization of hexamethylene diisocyanate with nitrodiols and nitrotriols.

SOURCE: Ref zh. Khim, Part II, Abs. 33253

REF SOURCE: Tr. Kazansk. khim.-tekhnol. in-ta, vyp. 33, 1964, 206-213

TOPIC TAGS: polyurethane, organic nitro compound, organic isocyanate compound

ABSTRACT: A study of the influence of the conditions prevailing in the reaction of polycondensation of hexamethylene diisocyanate with a series of nitrodiols and nitrotriols has shown that the yield and molecular weight of the polymer increase in the series of solvents chlorobenzene - ethyl acetate - dioxane; the optimum ratio of the mixture of reagents to the solvent is 1:2; a further dilution leads to a decrease in the molecular weight and a decrease in the yield of the polymer; at a temperature  $< 50^{\circ}$ , the reaction does not take place, and although raising the temperature to  $> 100^{\circ}$  increases the yield, it causes the formation of insoluble rubberlike polymers. The optimum reaction time is 6 hr, the reagent ratio being 1:1. Nitrodiols form soluble linear polymers under mild conditions, and under more drastic ones (temperature  $100^{\circ}$ , excess diisocyanate, high concentration of reagents or absence of solvent), cross-linked rubberlike products or friable powders insoluble in organic solvents and decomposing on heat-

Card 1/2

L 40107-6a

ACC NR: A56020539

ing above 130-150°. The stability and heat resistance of the polymers increase somewhat on multiple purification or reprecipitation or extraction with boiling solvents. For Report No. 1, see Ref. zh. Khim., 1965, 213282. V. Kopylov. [Translation of abstract].

SUB CODE: 07,11

Cord 2/2 *NR*

SOLODOVA, V.G.

Case history of osteomyelitis of the jaws in children. Stomatologiya  
41 no.4:62-64 J1-Ag '62. (MIRA 15:9)

1. Iz Rostovskogo-na-Donu oblastnogo gosptalya dlya invalidov  
Otechestvennoy voyny (konsul'tant - prof. N.I.Agapov).  
(OSTEOMYELITIS) (JAWS--DISEASES)

SOLODOVA, N.I

# USSR :

✓ Reprocessing of condensed water formed in manufacturing of synthetic fatty acids. N. K. Man'kovskaya, I. G. Aganovich, and N. I. Solodova. *Manoboleo-Zhirovyys Prom.* 19, No. 8, 52 (1982). Salting out of synthetic fatty acids, with distd. water contg. Na<sub>2</sub>SO<sub>4</sub> removes HOAc and HCOOH. Use of satd. salt soln. or addn. of salt directly to I produced the same results. The product after salting out contained HOAc plus CHOOH 1.5; PrOOH, BuOOH, plus valeric acid 25-30%; with the remainder comprising the higher mol. wt. acids, esters of these, and unsaponifiable matter. Vladimir N. Krutovsky

MAN'KOVSKAYA, N.I., kand.tekhn.nauk; BARSEGYAN, I.V., inzh.; SOLODOVA,  
N.I.

Odor-causing substances in synthetic fatty acids. Masl.-zhir.  
prom. 25 no.4:13-15 '59. (MIRA 12:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for  
Man'kovskaya, Barsегyan). 2. Shebekinskiy kombinat sinteticheskikh  
zhirovykh kislot i zhirovogo syr'ya (for Solodova).  
(Acids, Fatty)

c

BARSEGYAN, I.V., inzh.; SOLODOVA, N.I. ...

Determining the content of low-molecular acids in salts with  
the acid of a cationite. Masl.-zhir.prom. 25 no.8:34-35  
'59. (MIRA 12:12)

1. NIISZhIMS (for Barsegyan). 2. Shchebekinskiy kombinat  
sinteticheskikh zhirnykh kislot i zhirnykh spirtov (for  
Solodova).

(Acids, Organic) (Salts) (Ion exchange)



ACCESSION NR: AP4032572

S/0190/64/006/004/0722/0725

AUTHORS: Solodova, N. L.; Kozlov, L. M.; Burnistrov, V. I.

TITLE: Catalytic synthesis of nitropolyurethanes by copolymerization of diisocyanates with nitrodiols and nitrotriols

SOURCE: Vyssokomolek. soedin., v. 6, no. 4, 1964, 722-725

TOPIC TAGS: polymerization, polymer, copolymerization, copolymer, urethane nitrourethane, isocyanate, polyol, nitropolyol, sulfonic acid catalyst, toluenesulfonic acid, zinc chloride catalyst

ABSTRACT: The present investigation deals with copolymerization of hexamethylenediisocyanate (HMDIC) and 2,4-toluidenediisocyanate (TDIC) with 2-methyl-2-nitropropanediol-1,3 (MNPD), 2-ethyl-2-nitropropanediol-1,3 (ENPD), nitroisobutylglycerine (NIBG), and 2-oxymethyl-2-nitrohexandiol-1,3 (OMNHD) in the presence of various catalysts. In view of the negative results obtained in ethyl acetate solution without a catalyst, and a poor yield (30-35%) and poor polymer quality obtained with triethylamine, the authors performed tests with acid catalysts. In the presence of 1% zinc chloride the yield of nitropolyurethane from HMDIC and

Card 1/2

ACCESSION NR: AP4032572

MMPD at 50C increased in 4 hours to 95%. A substantial catalytic effect was also obtained from HMDIC and TDIC with ENPD, from HMDIC with NIBG, producing a 90% yield at 25C. However, zinc chloride produced a reaction mass of low uniformity, with some of the catalyst remaining in the polymer. In this respect, p-toluene-sulfonic acid proved superior to zinc chloride; it produced a polymer with a molecular weight of 5730 (a 98% yield). The copolymerization products of diisocyanates with nitrodiols yielded mostly colorless or slightly yellowish products, soluble in acetone, cyclohexane, dimethylformamide, nitrobenzene, and ethanol, and insoluble in water, benzene, and carbon tetrachloride. It was found that copolymerization of NIBG with equivalent amounts of diisocyanates may produce either linear or tridimensional polymers, while OMNHD yielded only tridimensional products. Orig. art. has: 1 table.

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskii institut im. S. M. Kirova (Kazan Chemicotechnological Institute)

SUBMITTED: 22May63

DATE ACQ: 11May64

ENCL: 00

SUB CODE: GC, MM

NO REF SOV: 004

OTHER: 002

Card 2/2

ACCESSION NR: AP4032928

8/0286/64/000/008/0057/0057

AUTHOR: Kozlov, L. M.; Burmistrov, V. I.; Solodova, N. L.

TITLE: Method of producing nitropolyurethans. Class C 06g, 39b, 22<sup>3</sup><sub>4</sub>,  
No. 161906 (747762/23-4, 9 Oct 1961)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1964, 57

TOPIC TAGS: nitropolyurethan, zinc chloride

ABSTRACT: A method of producing nitropolyurethans based on Author's Certificate No. 113550. The distinguishing feature is intensification of the process. The reaction is carried out in the presence of zinc chloride catalysts for 4 hours at a temperature of 50°C.

ASSOCIATION: None

SUBMITTED: 09Oct61

DATE ACQ: 07May64

ENCL: 00

SUB CODE: CH, MA

NO REF SOV: 000

OTHER: 000

Card

1/1

SHERISHORINA, S.I.; SOLODOVA, T.L.

Variability of micro-organisms under the influence of antibiotics.

Report No. 1: Trufy Sar. gos. med. inst. 26:192-196 '59.

(MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii (zav.,-  
prof. S.I. Sherishorina).

(STAPHYLOCOCCUS) (PENICILLIN)

SOLODOVA, T.L.

Influence of varying doses of levomycetin on the immunological condition of the macro-organism in experimental typhoid fever.  
Trudy Sar. gos. med. inst. 26:214-216 '59. (MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii  
(zav.- prof. S.I. Sherishorina).  
(CHLOROMYCETIN) (TYPHOID FEVER)

SOLODOVA, T.L.

Recurrences of typhoid fever following treatment with levomycetin  
under experimental conditions. Trudy Sar. gos. med. inst.  
26:217-219 '59. (MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii  
(zav. - prof. S.I. Sherishorina).  
(CHLOROMYCETIN) (TYPHOID FEVER)

SOLODOVA, T. L., CAND MED SCI, "SEARCH FOR <sup>means of the</sup> ~~WAYS OF~~ RATIONAL  
THERAPY OF TYPHOID FEVER WITH ANTIBIOTICS IN EXPERIMENT."  
DNEPROPETROVSK, 1960. (DNEPROPETROVSK STATE MED INST). (KL,  
2-61, 220).

-284-

DUNCHENKO, I.A.; SOLOIX VA, Ye.P.

Gamma-gamma logging of boreholes in prospecting for coal.  
Prikl. geofiz. no.28:138-144 '60. (MIRA 14:3)  
(Radioactive prospecting) (Coal)



SOLODOVCHENKO, D.V.

An electronic automatic regulator and remote control system for  
an electric steel-smelting furnace. Prom.energ. 18 no.2:9-10  
F '63. 'MIRA 16:2)  
(Automatic control) (Electric furnaces)

L 65269-65 EWT(m)/EPF(c)/ENP(j) RM

ACCESSION NR: AR5014410

UR/0058/65/000/004/E010/E010

SOURCE: Ref. zh. Fizika, Abs. 4E72

AUTHOR: Solodovnichenko, I. M.

TITLE: Phenomena accompanying the Sumoto effect in cyclohexanone

CITED SOURCE: Sb. nauchn. tr. Dnepropetr. inzh.-stroit. in-t, vyp. 29, 1963, 3-8

TOPIC TAGS: cyclohexanone, electrochemistry, electric conductivity, Sumoto effect

TRANSLATION: The Sumoto effect is investigated in cyclohexanone. It is found that the magnitude of the effect depends on the purity of the liquid and the radius of the cathode (for a cylindrical system), but the material of the cathode has no noticeable effect. The Sumoto effect was accompanied by liberation of matter at the cathode. Unipolar electrical conductivity was observed simultaneously with the Sumoto effect.

SUB CODE: OC, GC

ENCL: 00

dm  
Card 1/1

MITSEVICH, P.K.; SOLODOVNICHENKO, I.N.

On an effect of the movement of dielectric liquids in  
an inhomogeneous electric field. Zhur.fiz.khim. 39  
no.11:2664,2667 N '65. (MIRA 18:12)

SOLODOVNICHENKO, I.M.

Behavior of ethyl ether at the liquid - solid interface at the moment the electric field strength changes. Izv. vys. ucheb. zav.; fiz. 8 no.6:163-164 '65. (MIRA 19:1)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut. Submitted November 19, 1963.

MITTSKEVICH, P.K.; SOLODOVNIKHENKO, I.M.; SIGAREV, M.P.

Certain features of the behavior of ethyl ether in nonuniform  
electric fields. Elektrokimiia 1 no.9:1072-1076 S '65.  
(MIRA 18:10)

1. Dnepropetrovskiy inzhenerno-stroitelnyy institut.

S/781/62/000/000/034/036

AUTHORS: Silenok-Bel'skiy, G. A., Dikiy, A. G., Solodovchenko, S. I. Vitsenko, V. I.

TITLE: Measurement of electron concentration in a plasma at low frequencies

SOURCE: Fizika plazmy i problemy upravlyayemogo termoyadernogo sinteza; doklady I konferentsii po fizike plazmy i probleme upravlyayemykh termoyadernykh reaktsiy. Fiz.-tekhn. inst. AN Ukr. SSR. Kiev, Izd-vo AN Ukr. SSR., 1982, 165- 167.

TEXT: A method has been developed for measuring the concentration and collision frequency of electrons by determining the change in impedance of a solenoid into which the plasma is introduced. The electromagnetic field of the sounding signal was given a configuration such as to avoid electric polarization. Several schemes for density measurements were tried, and the best turned out to be the usual method of measuring the Q of a resonant circuit. The experiments were carried out at pressures  $10^{-1}$  -  $10^{-2}$  mm Hg, and the densities measured were in the range from  $4 \times 10^9$  to  $5 \times 10^{10}$  el/cm<sup>3</sup>. There are three figures.

Card 1/1

S/781/62/000/000/035/036

AUTHORS: Silenok-Bel'skiy, G. A., Dikiy A. G., Solodovchenko, S. I.

TITLE: Plasma electron concentration measurement with a resonator

SOURCE: Fizika plazmy i problemy upravlyayemogo termoyadernogo sinteza;  
doklady I konferentsii po fizike plazmy i probleme upravlyayemykh  
termoyadernykh reaktsiy. Fiz.-tekh. inst. AN Ukr. SSR, Kiev, Izd-vo  
AN Ukr. SSR, 1962. 167-169

TEXT: A method is proposed for measuring plasma electron concentration by determining the change in the dispersion properties of a waveguide system in which the plasma is placed, since the phase velocity of wave propagation in a waveguide system filled with plasma depends not only on the geometry of the system, the boundary conditions, and the frequency, but also on the electron concentration as well as the magnetic field, the collision frequency, and the type of gas. The effect of the plasma on the phase velocity in a waveguide with a helix partly filled with plasma was investigated experimentally. The apparatus and experimental conditions are briefly described. The experiments were carried out without a magnetic field, and it is indicated that application of the field would

Card 1/2

SOV/66-59-3-21/31

25(2)

AUTHOR: Solodovnik, A., Mechanic (Poltava)

TITLE: Some Remarks of a Mechanic

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 3, p 68 (USSR)

ABSTRACT: The author of the article complains about the frequent changes that occur in the design of fixtures such as valves TRV-2 supplied by the "Termo-avtomat" Plant in Tartu; these periodic changes, especially in thread (M-14 and M-16) render replacements of valves in case of repair very awkward. Riga Plant "Kompressor" has likewise changed from the production of 6, 8, 10 and 12 mm outer diameter tubes to 7 and 9 mm tubes, which causes considerable difficulties in the event of replacements. The same applies to the new starter P-222M which has superseded the former P-222 type starter issued by the Tbilisi Plant. The new starter does not take the standard coils. If a coil is burnt, the whole starter becomes use-

Card 1/2



Some Remarks of a Mechanic

SOV/66-59-3-21/31

less. The article cites other similar complaints. - In a foot note from the publishing house, workers in repair plants are asked to contribute by sending in their remarks on refrigeration machines and installations.

Card 2/2

YUGANOV, Ye.M.; GORSHKOV, A.I.; KAS'IAN, I.I.; BRYANOV, I.I.;  
KOLOSOV, I.A.; KOPANEV, V.I.; LEBEDEV, V.I.; POPOV, N.I.;  
SOLODOVNIK, F.A.

Vestibular reactions of astronauts during the "Voskhod"  
spaceship flight. Izv. AN SSSR. Ser. biol. no.6:877-883  
M-D '65. (MIRA 18:11)

SOLODOVNIK, F.S.; BOGOMOLOV, A.V.; ZHURAVSKIY, Yu.V.; FROLOV, A.G.

Electromagnetic metal sheet distributor. Biul.TSIICHM no.4:51  
'61. (MIRA 14:10)

(Electromagnets)

1. The first of the two main points of the report is that the

the second of the two main points of the report is that the

SOLODOVNIK, I.Ya. [Solodovnyk, I.IA.]

Make better use of machinery in harvesting potatoes and vegetables.  
Mekh. sil'. hosp. 9 no. 8:7-8 Ag '58. (MIRA 11:8)

1. Golovniy agronom Upravlinnya kartopli i ovochiv Ministerstva  
sil'skogo gosподарства USSR.

(Potatoes--Harvesting)  
(Vegetables--Harvesting)

SGLODOVNIK, L.G.; MAYKOV, O.A.; VASHUKOV, I.A.; PODERGIN, V.A.

Special core mixtures for casting iron cylinders. Lit. proizv.  
no.6:36 Je '62. (MIRA 15:6)

(Sand, Foundry) (Coremaking)

VASHUKOV, I.A.; SOLODOVNIK, L.G.; MAYKOV, O.A.

Zircon antisticking paint. Lit. proizv. no.1:40 Ja '62.  
(MIRA 16:8)

(Foundries—Equipment and supplies)

... .., ... 2010-2011, 1.0.; ... .., 1.0.

Effect of the type of anticorrosive coatings of chaplets on  
the quality of iron castings. Lit. profizv. no.4:5-6 Ap '64.  
(MIRA 18:7)



TARTAKOVSKIY, P.N., kand. tekhn. nauk, EKKIN, V.S., SOLODOVNIK, L.M.,  
ROYZEN, Ya.Sh.

Efficient procedure for overburden removal using a combined  
system of working. Met. i gornorud. prom. no. 3:53-56 My-Je '64.  
(MIRA 17:10)

NOVOZHILOV, M.G., prof.; TARTAKOVSKIY, B.N., kand.tekhn.nauk; ESENIN, V.S.,  
inzh.; SOLODOVNIK, L.M., inzh.; ROYZEN, Ya.Sh., inzh.

Substantiating the efficient limits for strip mining horizontal  
deposits with the use of continuous-operation equipment. Izv.vys.  
ucheb.zav.;gor.zhur. 7 no.7:3-7 '64. (MIRA 17:10)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut  
imeni Artema. Rekomendovana kafedroy otkrytykh gornykh rabot.

SOLODOVNIK, M. G.

Effectiveness of preparations in controlling the corn smut  
Ustilago zeae, Zashch. rast. ot vred. i bol. 5 no.6:25-26  
Je '60. (MIRA 16:1)

1. Zaveduyushchiy otdelom zashchity rasteniy Brestskoy oblastnoy  
gosudarstvennoy sel'skokhozyaystvennoy stantsii.

(Pruzhan'y District—Corn(Maize)—Diseases and pests)  
(Pruzhan'y District—Smuts)

DIL', A.; CHARUGINA, N.; BORODIN, A.; SOLODOVNIK, P.; SKLYAR, I.;  
SOLOVKIN, N.; POTAPOV, G.; PONOMAREV, N.; ALEKHIN, I. ;  
SOLOMENTSEV, K.; TOPYLIN, N.; SKOROVAROV, M.; KARABANOV, S.;  
BOGDANOV, N.; STRYUKOV, P.

Nikolai Vasil'evich Romenskii ( on the occasion of the 40th  
anniversary of his scientific, pedagogic, and public activity).  
Muk.-elev. prem. 24 no.12:29-30 D '58. (MIRA 12:1)  
(Romenskii, Nikolai Vasil'evich, 1894-)

SOLODOVNIK, P., RATANOVA, V.

For over-all disinfection of equipment. Muk.-elev.prom. 22 no.3:  
15-16 Mr '56. (MIRA 9:7)  
(Grain--Diseases and pests) (Disinfection and disinfectants)

SOLODOVNIK, P.

Sprayer for liquid disinfection of storehouses. Muk.-elev.prom. 23  
no.1:22 Ja '57. (MLRA 10:5)

1. TSentral'naya opytno-proizvodstvennaya laboratoriya po bor'be  
s ambarnymi vreditelyami.

(Disinfection and disinfectants)

(Spraying and dusting equipment)

(Warehouses)

SOLODOVNIK, P.

Use of paper disks impregnated with hydrocyanic acid in  
disinfecting flour, meal, and feed establishments. Muk.-  
elev.prom. 23 no.3:19-21 Mr '57. (MLRA 10:5)

1. TSentral'naya opytno-proizvodstvennaya laboratoriya po  
bor'be s ambarnymi vreditelyami.  
(Disinfection and disinfectants) (Hydrocyanic acid)

BRUDNAYA, A.A., kand.sel'skokhoz.nauk; SOLODOVNIK, P.S.

New preparation for moist disinsectization of empty granaries.  
Soob. i ref. VNIIZ no.4:21-24 '61. (MIRA 16:5)  
(Granaries—Disinsection) (Alodan)



BRUDNAYA, A.A., kand.sel'skokhoz.nauk; SOLODOVNIK, P.S.

Alodan in moist disinsectization of granaries. Zashch. rast. ot  
vred. i bol. 6 no.12:27 D '61. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov  
yego pererabotki.

SOLODOVNIK, P.S.---

Conference on the control of granary pests. Zashch. rast. ot vred.  
i bol. 7 no.8:6-7 Ag '62. (MIRA 15:12)

1. Vsesoyuznyy institut zerna.  
(Granaries—Disinfection)

RATANOVA, V.F.; SOLODOVNIK, P.S.

Preventive measures against granary pests. Zashch. rast. ot vred.  
i bol. 8 no.8:35-36 Ag '63. (MIRA 16:10)

1. Institut zerna, Moskva.

SOLODOVNIK, P.; POLCHANINOVA, G.; SERGEYEV, F.; VIKHANSKIY, Yu.

Practices in disinfecting seed peas with chloropicrin in winter.  
Muk.-elev. prom. 29 no.3:9 Mr '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.

SOLODOVNIK, S.F., inzhener.

High-frequency soldering of machine parts. Mashinostroitel' no.1:  
40-42 Ja '57. (MLRA 10:4)

1. Khar'kovskiy traktornyy zavod.  
(Solder and soldering)

SOLODOVNIK, S.F., inzhener.

Thermal control of self-tempering and electric tempering. Mashino-  
stroitel' no.6:41-43 Je '57. (MIRA 10:7)  
(Tempering)

Belikov K, S. F.  
SOLODOVNIK, S. E., insh.

Using multiturn and multilayer magnetos. Mashinostroitel'  
no. 12:31-32 D '57. (MIRA 10:12)  
(Magneto)

SOV/137-58-11-22967

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 162 (USSR)

AUTHOR: Solodovnik, S. F.

TITLE: An Experiment in Mass-production High-frequency Hardening of Small Machine Parts (Opyt massovoy vysokochastotnoy zakalki melkikh detaley)

PERIODICAL: Mashinostroitel', 1958, Nr 6, pp 25-27

ABSTRACT: Mass-production high-frequency hardening of small machine parts is widely used at the Kharkov tractor plant. The heating is done on GZ-46 and LGZ-60 vacuum-tube oscillator-type equipment. Each apparatus processes several tens of types of machine parts (M). The multipiece high-frequency hardening of M is carried out on three types of inductors (I), with differently shaped induction wire which envelops all the M at the same time. The loading of M into these so-called "loop I" (their schematics are given) is achieved with the aid of special devices which after the heating are moved out of the I and eject the M into the quenching tank. Multipiece hardening greatly reduces the time required for the heating of each M, which fact increases the productivity of the installation.

Card 1/1

A. B.



SOLODOVNIK. S.F., inzh.

Automatic hardening of caterpillar link pins. Isobr. 1 rats.  
no.8:22-23 Ag '58. (MIRA 11:9)  
(Tempering)

SOLODOVNIK, S.F., inzh.

Hardening cammed shafts in a shaped inductor of a machine  
generator. Mashinostroitel' no.12:20-21 D '59.

(MIRA 13:3)

(Metals--Hardening)

S/129/60/000/011/013/016  
E073/E535

AUTHOR: Solodovnik, S.F., Engineer

TITLE: Quenching of the Surface of Ring-shaped Grooves

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,  
1960, No.11, p.48

TEXT: For hardening components with ring-shaped grooves on universal equipment intended to serve a variety of components, it is advisable to apply one-piece inductors. The author developed an inductor in which the induction turn has the shape of two circular sections which are joined by tangents. The larger circle has a diameter equalling that of the external diameter of the component, whilst the diameter of the smaller circle equals the diameter of the groove plus tolerance. The cross-section of the inductor turn is determined by the shape and dimensions of the groove. The clearances between the bottom and the side surfaces of the groove and the inductor turn are selected from the point of view of ensuring uniform heating. To heat the groove, the component is fed in, then shifted so that the groove fits the smaller diameter arc of the turn. If the component is made to rotate quickly, whilst the inductor is switched on, the entire surface of the

Card 1/2

S/129/60/000/011/013/016  
E073/E535

Quenching of the Surface of Ring-shaped Grooves

groove is heated through. This type of inductor is simple to produce and easy to apply. There is 1 figure.

ASSOCIATION: Khar'kovskiy traktornyy zavod  
(Khar'kov Tractor Works)

✓  
—

Card 2/2

SOLODOVNIK, S.F.

Simultaneous induction heating of two sides of supporting rings in  
case hardening. Mashinostroitel' no. 4:32 Ap '61. (MIRA 14:4)  
(Case hardening)

SOLODOVNIK, S.F., inzh.

Quenching unit for heat treatment of pinions. Mashinostroenie  
no.1:41-43 Ja-F '62. (MIRA 15:2)

1. Khar'kovskiy traktornyy zavod.  
(Furnaces, Heat treating)

SOLODOVNIK, S.F., inzh.

Hardening of nonuniform parts with induction heating.  
Metalloved. i term. obr. met. no.3:61-62 Mr '62. (MIRA 15:2)

1. Khar'kovskiy traktorny zavod.  
(Induction hardening)

SOLODOVNIK, S.F., inzh.

Automatic machine for hardening thin cylindrical parts.  
Mashinostroenie no.4:36-37 J1-Ag '62. (MIRA 15:9)

1. Khar'kovskiy traktornyy zavod.  
(Metals--Hardening)



SOLODOVNIK, S.F., inzh.

Semiautomatic machine for filling heat-insulating substance  
in the holes of parts to be cemented. Mashinostroenie no.3:  
26 My-Je '63. (MIRA 16:7)

1. Khar'kovskiy traktorny zavod.  
(Cementation(Metallurgy))

SOLODOVNIK, S.F.

High frequency current hardening unit for gears. Metalloved.  
1 term. obr. met. no.6:62-63 Je '63. (MIRA 16:6)

1. Khar'kovskiy traktorny zavod.  
(Induction hardening—Equipment and supplies)

SOLODOVNIK, S.F.

Machine for stuffing heat-insulating material. Mashinostroitel'  
no.12:6 D '63. (MIRA 17:1)

SOLODOVNIK, S.F.

Mechanizing the packing of a heat insulating mass during  
chemical and heat treatment. Metalloved. i term. obr. met.  
no.5:48-49 My '64. (MIRA 17:6)

1. Khar'kovskiy traktornyy zavod.

KAPANEV, V.K.; KATSEV, P.G.; DEMIDOV, A.I.; SOLOLOVNIK, S.F.

Inventors suggest. Mashinostroitel' no.2:30-31 F '65.  
(MIRA 18:3)

PROCESS AND PROPERTIES INDEX																									
1ST AND 2ND COPIES													100 AND 4TH COPIES												
<p><i>M</i></p> <p><i>7</i></p> <p><b>*Visual Spectroscopic Determination of Indium in Solutions.</b> A. K. Rusanov and S. M. Solodovnik (<i>Redkie Metally</i>, 1937, 6, (5 6), 29-31; <i>C. Abstr.</i>, 1938, 32, 5329). [In Russian.] The In solution is sprayed into an acetylene flame and a wedge-shaped chamber containing a 0.2% solution of <math>K_2Cr_2O_7</math> is interposed between the flame and the collimator of the spectroscope. The determination is based on the thickness of solution required to obscure the In line. The method can be used in the range 0.002-0.2%, In in solution, with an accuracy of about 10%.</p>																									
<p>ASB SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

SOLODOVNIK, S.

55. Chemical treatment of non-luminescent minerals. Quantitative analysis of wolframite and scheelite. G. Korovski, S. Solodovnik and O. Loshakov (Bull. Acad Sci U.R.S.S. Series R. T. 1945 9 465-466. - A lecture.

Immediate source clipping

COMMON ELEMENTS		COMMON VARIANTS	
<p>PROCESSING AND PROPERTIES INDEX</p>			
<p>SPECTRUM ANALYSIS OF METALLIC ANTIMONY BY MEANS OF COMPRESSED ELECTRODES. S. . SOLODOVNIK AND A. K. RYSANOV. (ZVE ST. AKAD. NAUK S.S.S.P., 1946, (Fig. ) 9, (6) 636-638) (In russian) Spark spectra of tablets made from powdered Sb were used for the analysis of Sb alloys containing Pb, Bi, Cu, Sn, Ag, Cd, As, Au, Co, Ni, Mn, and Fe and tables of the lines used are given. Synthetic standards were made from Sb alloys, powdered and diluted with pure Sb. The richer alloys were also diluted for analysis so that comparisons were only made with &lt; 10% of the element present in the tablet. The method results in a probable error of 3-6% of the conc. of the element estimated. E. van S.</p>			
<p>AS 6-51A METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>107085 74</p>		<p>107085 74</p>	



31. "Antimony." 1961. 100 p.

Dissemination: "1. Antimony (element) and Metallic Antimony."  
All-Union Scientific Institute of Mineral Raw Materials, 1. Part 47.

SC: Vechnyye Deyaniya, Mar, 1967 (Project #17036)

Solodovnik, S. M.

Chem

1595. Spectrometric analysis of titanium. Sh. G. Melamed, M. A. Notkina and S. M. Solodovnik. *Izv. Akad. Nauk SSSR, Ser. Khim.*, 1956, 10 (2), 179-180; *Ref. Zhur., Khim.*, 1956, Abstr. No. 10,140.—Admixtures of P, Si, Mg and Ca in titanium

2

1595

are determined spectrographically. The sample of titanium under analysis is converted into  $TiO_2$  and standards are prepared by mechanical mixing of pure  $TiO_2$  with oxides of contaminants, excluding P, which is introduced as  $Mg_3P_2O_7$ . (i) Phosphorus is determined in a constant-current arc by volatilisation in a deep crater of a carbon electrode by means of the line P I 2553-28 Å. The sensitivity is 0.01 per cent. (ii) Silicon and Mg are determined in a constant-current arc by using a mixture of 15 mg of  $TiO_2$ , 7.5 mg of carbon and 7.5 mg of Ni oxide. The sensitivity for Si was 0.01 per cent. from the lines Si I 2616-12 - Ni I 2340-02 Å. Magnesium is determined from the lines Mg II 2795-53 - Ti II 2784-64 Å for a content of 0.001 to 0.03 per cent. and from the lines Mg 2779-83 - Ti II 2784-64 Å when the content is > 0.03 per cent. Relative errors for single determinations of Si and Mg are  $\pm 8$  per cent. and  $\pm 9$  per cent., respectively. (iii) The determination of Si, Mg and Ca is carried out by briquetting a mixture of  $TiO_2$  with copper dust in a ratio of 1:8. Magnesium was determined from the relative intensities of lines Mg II 2795-53 - Ti II 2805-01 Å, and Ca from the lines Ca II 2968-47 - Ti I 3958-21 Å. The sensitivity for Si was 0.1 per cent., for Mg 0.003 per cent. and for Ca 0.01 per cent. The relative error of a single determination was  $\pm 5$  per cent. R. Loun

pm LFH

SOLODOVNIK, S.M.

Determination of antimony in antimony ores and of impurities  
in antimony trioxide and metallic antimony. Izv.AN SSSR.Ser.  
fiz.19 no.2:182-184 Mr-Apr '55. (MLRA 9:1)  
(Tartu--Spectrum analysis--Congresses)

SOLODOVNIK. S.M.

1448  
SPECTROGRAPHIC DETERMINATION OF SCANDIUM IN  
MINERALS, ORES AND THEIR PRODUCTS. S. M.

SOLODOVNIK, A. K. RUSANOV, and A. I. KONDAKCHINA (Moscow  
State Research Inst. of Rare Metals). Zhur. Analit Khim.  
12, 312-5 (1957) May-June. (In Russian)

A direct qualitative spectrographic determination of Sc  
(0.01 to 0.5%) in minerals is described, and a universal  
method for determining Sc in different minerals and ores  
is offered. The method is based on the separation of Sc  
with calcium on thorium oxalates followed by spectro-  
graphic analysis of the resulting oxides with the use of  
united standards prepared from calcium and thorium  
oxides. The error of determination is ±10%. (R-auth)

4541  
4562

4541  
4562

4541

4541  
4562

SOLODOVNIK, S. M.

21  
 / Spectrum analysis method for the determination of impurities in lithium, strontium, and barium: M. A. Notkina and S. M. Solodovnik. *Zashchita* Lab. 23, 600-72 (1957). — A rapid method without a sepn. of Li, Sr, and Ba from the impurities consisted in a conversion of the metals into carbonates by soln. in redistd. H<sub>2</sub>O, pptn. with CO<sub>2</sub>, and drying at 105-10°, and the direct use of the carbonates for analysis. The spectra were obtained with a d.c. arc, with vertical electrodes. With Sr and Ba the sensitivity was detd. by fractional volatilization of the sample mixed with graphite powder + S; for Li the proper conditions for such volatilization could not be found, and the total sample was volatilized. Proper spectrum analytical conditions for the detn. of Al, Fe, Si, Mg, Mn, and Cu in metallic Li, and of Fe, Cd, Si, Cu, Pb, Cr, and Zn in Sr and Ba, and in addn. of Bi, Sn, and Sb in Ba, and the sensitivity of the detns. were tabulated. W. M. Sternberg

6  
 1-4E4j  
 1-4E3d

MT

24(7)

PHASE I BOOK EXPLOITATION

Nov. Universitet

Materialy i Vsesoyuznogo soveshchaniya po spektroskopii, 1956.  
t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union  
Conference on Spectroscopy, 1956. Vol. 2: Atomic Spectroscopy)  
Moscow: Izd-vo L'vovskogo univ., 1958. 568 p. (Series: 126)  
Vizitskiiy shoruk, v.p. 2(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Lomskaya po  
spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Asp. Ed.);  
P.S. Reprent, Doctor of Physical and Mathematical Sciences;  
I.A. Pabinskiiy, Doctor of Physical and Mathematical Sciences;  
V.A. Farkhant, Doctor of Physical and Mathematical Sciences;  
G.S. Koritskiy, Candidate of Technical Sciences; S.M. Nayakii,  
Candidate of Physical and Mathematical Sciences; L.K. Klimovskiy,  
Candidate of Physical and Mathematical Sciences; V.S. Nilyanchuk  
(Moscow), Doctor of Physical and Mathematical Sciences; A.Ye.  
Glimberman, Doctor of Physical and Mathematical Sciences;  
M.I. A.L. Gassiy, Tech. Ed.; T.V. Zarynyuk.

FOREWORD. This book is intended for scientists and researchers in  
the field of spectroscopy, as well as for technical personnel  
using spectrum analysis in various industries.

CONTENTS: This volume contains 177 scientific and technical studies  
of atomic spectroscopy presented at the 10th All-Union Confer-  
ence on Spectroscopy in 1956. The studies were carried out by  
members of scientific and technical institutes and include  
extensive bibliographies of Soviet and other sources. The  
studies cover many phases of spectroscopy: spectra of rare earths,  
electromagnetic radiation, physicochemical methods for controlling  
uranium production, physics and technology of gas discharges,  
optics and spectroscopy, abnormal dispersion in metal vapors,  
spectroscopy and the combustion theory, spectrum analysis of ores  
and minerals, photographic methods for quantitative spectrum  
analysis of metals and alloys, spectral determination of the  
hydrogen content of metals by means of isotopes, tables, and  
statistical study of variation in the parameters of calibration  
curves, determination of traces of metals, spectrum analysis in  
metallurgy, thermochemistry in metallurgy, and principles and  
practice of spectrochemical analysis.

Card 2/31

Brickov, M.R. Studying Ionization and Excitation Conditions in the Flame of an Arc Discharge	338
Motkina, M.A., and S.M. Solodovnik. Spectrographic Method for the Determination of Impurities in Alkali and Alkaline-earth Metals	341
Klokh, I.M. Spectrographic Determination of Dispersed Elements in Ores and Concentrates, and Determination of Impurities in the Dispersed Elements	343
Polyakov, S.M., and A.K. Rusanov. Spectrographic Analysis of Rare Earth Elements	346
Shvengirdze, R.R. Spectrum Analysis of Mixtures of Rare Earth Elements	350
Smirnov, M.P., and M.A. Puga. Use of Solid-state Chemical Reactions in Spectrum Analysis	355
Smirnov, M.P., and T.A. Leyderman. Use of Solid-state Chemical Reactions in Spectrum Analysis	358
Shvengirdze, R.R., A.K. Rusanov, and A.I. Komarova. Spectral Analysis for the Determination of Elements in Ores, Ores, and Their Products	366



5(2), 5(4)

SOV/75-14-2-21/27

AUTHORS: Solodovnik, S. M., Kondrashina, A. I.

TITLE: Determination of Small Amounts of Hafnium Dioxide in Zirconium Dioxide by a Spectroscopic Method (Opredeleniye nalykh kolichestv dvoukisi gafniya v dvoukisi tsirkoniya spektral'nyy metodom)

PERIODICAL: Zhurnal analiticheskoy khimii, 1952, Vol 14, Nr 2, pp 243-249 (USSR)

ABSTRACT: Mortimore and Noble (Ref 7) recommended an addition of barium fluoride as buffer and the evaporation of the sample with tapering electrodes at a high current intensity (30 a) in order to increase the sensitivity of the spectroscopic determination of hafnium in zirconium dioxide. The spectra are recorded by means of a grating spectrograph. The authors of the present paper carried out their investigations under these conditions. It was found that by using the autocollimation spectrograph KSA-1 (KS-55) the addition of barium fluoride and the evaporation of the sample at high current intensity do not lead to an increased line intensity of hafnium. Therefore it may be concluded that the high sensitivity attained by Mortimore (0.003%) is due to the use of a grating spectrograph of high dispersion. Also the addition of sodium phosphate

Card 1/3



307/75-14-2-21/27

Determination of Small Amounts of Hafnium Dioxide in Zirconium Dioxide by  
a Spectroscopic Method

as buffer (Ref 8) did not yield the desired results. The desired increase in the sensitivity of hafnium determination could be obtained by means of the spectrograph KSA-1 (KS-55) with a single-lens condenser only under the following conditions: 20 mg  $ZrO_2$  are mixed with 10 mg coal powder and introduced into a deepening in the tapered graphite electrode. The dimensions of the anode are given in the paper. In order to obtain a spectrum, two electrodes filled with the sample are produced. The upper graphite electrode (cathode) ends conically. A direct-current arc of a 10 a current intensity flows between the vertically arranged electrodes. The strongly enlarged picture of the electrodes is projected on a slit of 0.01 mm; the center of the flame is photographed. The exposure takes 2 minutes. Each spectrum is obtained by photographing 2 spectra subsequently on the same place of the photoplate. In the spectra obtained the lines of hafnium are photographed at 2641.4 Å and the comparative line of zirconium at 2626.0 Å as well as the background near these lines. The determination of the hafnium concentration is performed on the basis of a standard line in the coordinates

Card 2/3

SOV/75-14-2-21/27

Determination of Small Amounts of Hafnium Dioxide in Zirconium Dioxide by a Spectroscopic Method

$\lg \frac{I_{\text{Zr-background}}}{I_{\text{Hf-background}}} - \lg C_{\text{Hf}}$  . The standard line for the concentration interval of  $C_{\text{Hf}}$  between 0.003 and 0.1% is represented in the paper. The method makes it possible to determine quantitatively thousandths of per cents of  $\text{HfO}_2$  in  $\text{ZrO}_2$ . The probable error in the individual determinations is, at amounts of 0.003 - 0.03% hafnium,  $\pm 20 - 30\%$ , at higher amounts of hafnium the error is  $\pm 10\%$ . The authors thank A. K. Rusanov for valuable advice. There are 1 figure and 11 references, 3 of which are Soviet.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut redkikh i malykh metallov, Moskva (State Scientific Research Institute of Rare- and Trace Metals, Moscow)

SUBMITTED: December 10, 1957

Card 3/3

ANALYSIS OF SMALL QUANTITIES OF SUBSTANCES

Method of determining the presence of small quantities of substances in pure substances. Moscow, 1960. 112 p. (Series: Sci. Transl. 12) 3,500 copies printed.

See, also: A.P. Vinogradov, *Academical*, and D.I. Pyzhovskiy, *Doctor of Chemical Sciences*, M. of Publishing House: M.P. Volynskiy, Tech. Ed.: V.V. Polyakov.

NOTE: This collection of articles is intended for chemists, metallurgists, and engineers.

CONTENTS: The articles describe methods for detecting and determining various substances and their traces in pure series. Also discussed are many chemical, physicochemical, electrochemical, spectrochemical and luminescence methods of analyzing materials of high purity. The editors state that these methods have been developed within the last five or six years by various Soviet scientific institutes, and are now widely used in research and factory laboratories of the Soviet Union. So personalities are mentioned. References, mostly Soviet, accompany each article.

Method, D.I., and S.K. Solodovnik, *Analysis of Substances for Determining*

Substances 212

Method, D.I., and S.K. Solodovnik, *Analysis of Substances for Determining*

Substances 215

Method, D.I., and S.K. Solodovnik, *Analysis of Substances for Determining*

Substances 217

Method, D.I., and S.K. Solodovnik, *Analysis of Substances for Determining*

Substances 221

Method, D.I., and S.K. Solodovnik, *Analysis of Substances for Determining*

Substances 224

Method, D.I., and S.K. Solodovnik, *Analysis of Substances for Determining*

Substances 227

Method, D.I., and S.K. Solodovnik, *Analysis of Substances for Determining*

Substances 231

33414  
S/032/62/028/002/012/037  
B125/B104

Increase of the sensitivity of...

with NaCl, influence the relative intensity of the impurity elements to be determined. The effect of NaCl in elements with relatively low ionization potential (Ga, In, Tl) is significant only if the concentration of the main component is low. The effect of the main component above a given concentration upon the impurity line intensity is independent of the presence of NaCl. The effect of NaCl is not eliminated even by relatively high concentrations of elements with high ionization potential (Bi, Si, Sb, etc.). The main component is partially separable in the chemical spectrum analysis of metals with low ionization potential. The remainder is suited as an intensifying impurity, and the addition of NaCl to the concentrate is unsuitable. NaCl is required in the analysis of metals with relatively high ionization potential. The methods discussed here are suited for semiconductor engineering. The accuracy of determination with an initial weighed portion of 1 g (neglecting possible impurities) is presented in a table. There are 2 figures, 1 table, and 11 references: 9 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: B. Scribner, H. J. Mullin. Res. Nat. Bur. Standards, 37, 379 (1946); R. Breckpot. Congr. adv. method anal. Spectr. prod. met. (Paris), 8, 33 (1947).

Card 2/3

SOLODOVNIK, S. M.

The Second All-Union Conference on the Preparation and Analysis of High-Purity Elements, held on 24-28 December 1963 at Gorky State University im. N. I. Lobachevskiy, was sponsored by the Institute of Chemistry of the Gorky State University, the Physicochemical and Technological Department for Inorganic Materials of the Academy of Sciences USSR, and the Gorky Section of the All-Union Chemical Society im. D. I. Mendeleyev. The opening address was made by Academician N. M. Zhavoronkov. Some 90 papers were presented, among them the following:

L. L. Baranova and S. M. Solodovnik. Spectrochemical determination of 9 elements in high-purity bismuth with sensitivity increased to  $10^{-6}$  to  $10^{-7}\%$ .

*Zhur. ANAL. Khim. 19 No. 6 1964 (p. 777-79)*

BARANOVA, L.L.; SOLODOVNIK, S.M.

Chemical-spectral method of analysis of high purity bismuth.  
Zhur. anal. khim. 19 no.5:588-592 '64. (MIRA 17:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy  
institut redkometallicheskoj promyshlennosti, Moskva.

BERGEL'SON, L.D.; SOLODOVNIK, V.D.; SHEMYAKIN, M.M.

New synthesis of  $\alpha$ - and  $\beta$ -eleostearic acids. Izv.AN SSSR.Otd.  
khim.nauk no.7:1315 J1 '62. (MIRA 15:7)

1. Institut khimii prirodnnykh soyedineniy AN SSSR.  
(Eleostearic acid)

L 26556-66 -- EWT(m) RM

ACC NR: AP6017361

SOURCE CODE: UR/0062/66/000/003/0499/0505

AUTHOR: Bergel'son, L. D.; Solodovnik, V. D.; Shemyakin, M. M.

ORG: Institute of Chemistry of Natural Compounds, AN SSSR (Institut khimii prirodnikh sovedinenny AN SSSR)

TITLE: Stereoregulated synthesis of unsaturated compounds. Report 9. Stereochemistry of the reaction between aldehydes and beta, gamma-unsaturated triphenylphosphorylides

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 499-505

TOPIC TAGS: organic synthetic process, aldehyde, stereochemistry, halide, organic phosphorus compound, IR spectrum

ABSTRACT: The effect of the polarity of the medium and the nature of the halide ions on the steric trend of the carbonyl-olefinization reaction was studied with the aid of beta, gamma-unsaturated triphenylphosphorylides. Conditions which permit the utilization of the carbonyl-olefinization reaction for the stereo-directed synthesis of trans,trans- and trans,cis-dienes were established. The authors express their gratitude to L. B. Senyavina who performed the IR-spectra. Orig. art. has: 3 formulas and 1 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 18Oct63 / ORIG REF: 006 / OTH REF: 012

Card 1/1

UDC: 542.91+541.63



SOLODOVNIK, V.D.; DAVYDOV, A.B.; IVANOVA, Z.G.; MINDLIN, Ya.I.;  
LEZNOV, N.S.

Properties of and the possibility of using organoborosilicon  
polymers as components of heat-resistant adhesives. Plast.  
massy no.3:39-42 '63. (MIRA 16:4)

(Adhesives) (Silicon organic compounds)  
(Boron organic compounds)

BERGEL'SON, L.D.; SOLODOVNIK, V.D.; DYATLOVITSKAYA, E.V.; SHEMYAKIN, M.M.

Unsaturated acids and macrocyclic lactones. Report No.9: Preparation of conjugated polyene fatty acids via Wittig reaction, and the synthesis of  $\alpha$ -eleostearic acid. Izv. AN SSSR. Otd.khim. nauk no.4:683-687  
Ap '63. (MIRA 16:3)

1. Institut khimii prirodnikh soedineniy AN SSSR.  
(Acids, Fatty) (Eleostearic acid)

SOLODOVNIK, Ya.V., inzhener.

Movable metal bracing for trenches attached to a multiple-bucket ditch digger.  
Elek.sta. 24 no.10:53 0 '53. (MIRA 6:10)  
(Ditches)

SOLODOVNIK, Ya.V., inzhener.

Mobile formwork for lining canals and tunnels of large cross-section with  
concrete. Elek.sta. 24 no.11:48-50 N '53. (MLRA 6:11)  
(Concrete construction--Formwork)